



CLEARING THE AIR

2019 APCD Workshop Series

Are you curious about the air you breathe, what's in it, and how it's protected?

Join us at our free monthly workshops and get an in-depth look at how we keep the air clean.

FEBRUARY 18	JULY 15
MARCH 18	AUGUST 19
APRIL 15	SEPTEMBER 16
MAY 20	OCTOBER 21
JUNE 17	NOVEMBER 18

6 p.m-7:30 p.m. | Louisville Free Public Library, 301 York St.

For more info, go to www.louisvilleky.gov/APCD
(502) 574-6000

CLEARING THE AIR

2019 APCD Workshop Series



The **APCD Workshop Series** seeks to:

- Increase the community's understanding of Louisville's air and of APCD's many functions
- **EMPOWER** citizens
- Provide a more informal forum for dialogue, Q&A and feedback
- Continue with community engagement efforts

CLEARING THE AIR

2019 APCD Workshop Series



Today's workshop seeks to:


1. Explore the many functions and operations of APCD
2. Help the public better understand how APCD's regulatory authority, air monitoring and programming are used to help keep Louisville's air clean
3. Discuss opportunities where the community can engage with and provide feedback to APCD as we continue improving air quality in Louisville

CLEARING THE AIR

2019 APCD Workshop Series



Remember...

- There are **NO** silly questions
- Public Participation = 
- Interactive/informal workshop
 - Ask questions as they come to mind
 - Feedback? Email Clearingtheair@louisvilleky.gov



APCD 101

Air Pollution Control District
March 18, 2019

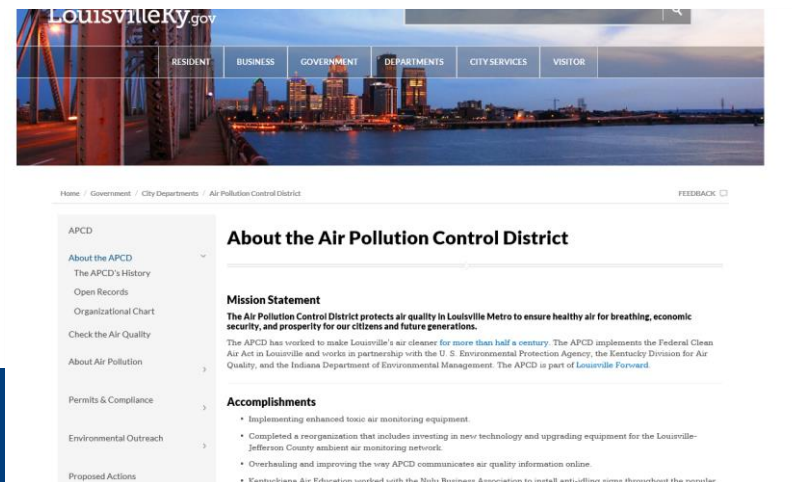


History

Air Pollution Control District

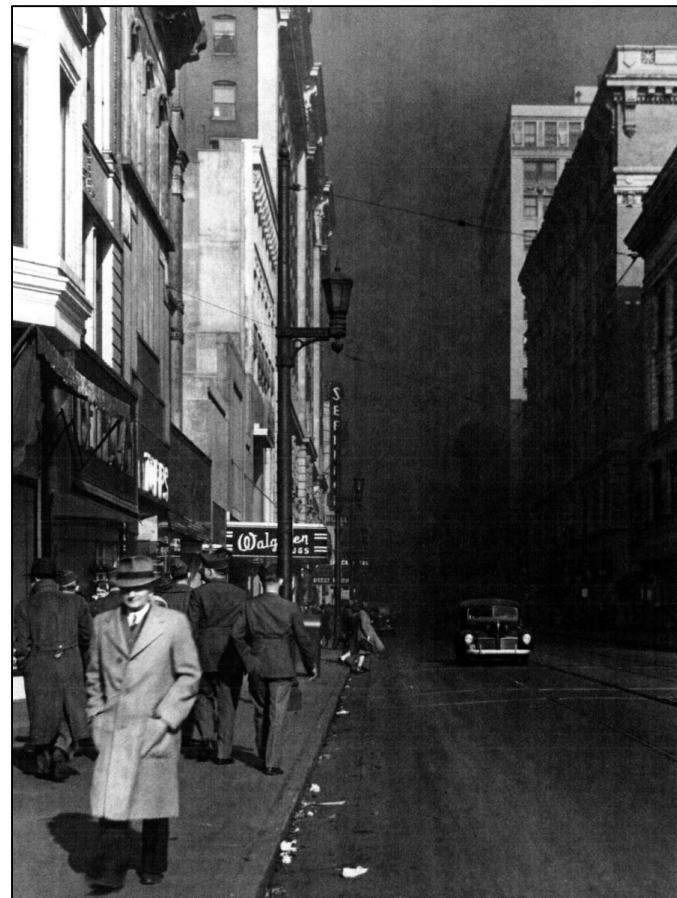
Mission Statement:

*The Air Pollution Control District **protects air quality in Louisville Metro to ensure healthy air for breathing, economic security, and prosperity for all Louisvillians.***



Air Pollution Control

- 1945** – Louisville Smoke Commission established
- 1952** – Air Pollution Control District of Jefferson County formed (KRS Chapter 77)
- 1956** – Air pollution control study understand pollution conducted in Rubbertown
- 1970** – Environmental Protection Agency (EPA) established



Fourth Street 1943

Air Pollution Control



Louisville Skyline August 1973

- 1975** – Corporate Average Fuel Economy (CAFE) fuel mileage standards issued
- 1984** – Vehicle Emissions Testing (VET) program launched
- 1995** – Louisville gas stations required to sell reformulated gasoline
- 1999** – Air Quality Index (AQI) developed to report current and forecasted air quality

Air Pollution Control

- 2005** – Strategic Toxic Air Reduction Program (STAR) adopted
- 2014** – APCD establishes Kentucky's first near-road air monitoring site at I-264/I-65
- 2017** – APCD partners with the EPA to test advanced air monitoring technology in Rubbertown; air toxics monitoring Auto GC
- 2018** – APCD launches *Clearing the Air* Workshop Series



Who We Are

- To whom do we report?
 - The Community
 - Environmental Protection Agency
 - Ky. Division for Air Quality
 - Air Pollution Control Board
 - Louisville Metro Government
- How are we funded?
 - Federal Grants
 - Permit Fees
 - Emission Fees
 - Program Fees
 - Louisville Metro General Fund

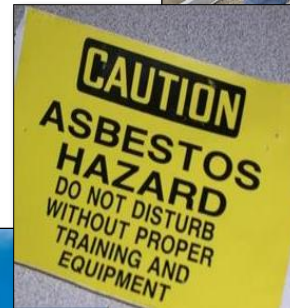
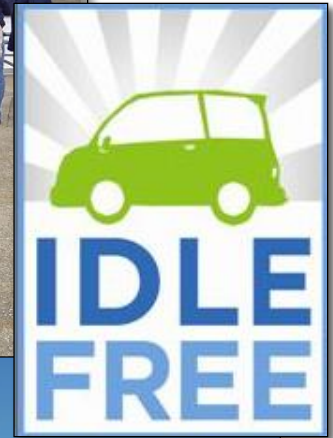
APCD Goals

Ensure healthy air for
breathing

Help local businesses meet
air quality standards

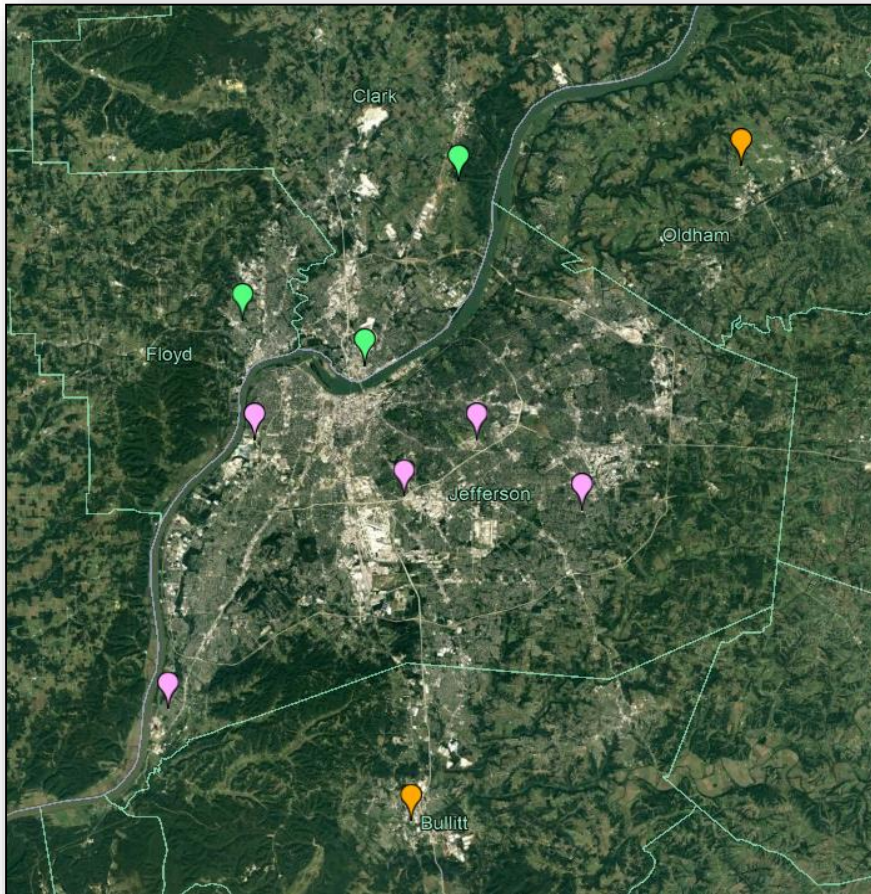
What We Do

- Collect information
- Administer rules
- Issue and enforce permits
- Educate and assist
- Policy development



Air Monitoring

Louisville Metropolitan Service Area (MSA) Network



Air quality monitor operators:

- Louisville Metro Air Pollution Control District (**pink** markers)
- Kentucky Division for Air Quality (**orange** markers)
- Indiana Department of Environmental Management (**green** markers)

What do we monitor?

- The Clean Air Act requires EPA to set NAAQS (40 CFR part 50)
- EPA sets NAAQS for **six principal pollutants**, which are called “**criteria**” air pollutants:
 - Carbon Monoxide
 - Lead
 - Particulate Matter
 - Oxides of Nitrogen
 - Sulfur Dioxide
 - Ozone



Why do we monitor?

- 40 CFR 58.2 (addresses quality assurance procedures, SIPs, air quality standards, etc.)
- To provide air pollution data for the general public (AQI)
- Observe pollution trends throughout the region
- Offer a database for research and evaluation of effects
- Protect human health, welfare and improve the overall quality of the air we breathe



Current NAAQS Status

Pollutant	Standard	Averaging Time	Attainment Status
Carbon Monoxide	9 ppm	8-hour	Attainment
	35 ppm	1-hour	Attainment
Lead	0.15 $\mu\text{g}/\text{m}^3$	Rolling 3-month Average	Attainment
Nitrogen Dioxide	53 ppb	Annual Average	Attainment
	100 ppb	1-hour	Attainment
Particulate Matter (PM10)	150 $\mu\text{g}/\text{m}^3$	24-hour	Attainment
Particulate Matter (PM2.5)	12.0 $\mu\text{g}/\text{m}^3$	Annual Average	Attainment
	35 $\mu\text{g}/\text{m}^3$	24-hour	Attainment
Ozone	0.070 ppm	8-hour	Nonattainment
Sulfur Dioxide	75 ppb	1-hour	Partial County Nonattainment

Air Toxics / PAMS Monitoring

- In addition to Criteria pollutant monitoring, APCD now monitors for Volatile Organic Compounds (VOCs)
- Objectives
 - Characterize ambient VOC concentrations in the vicinity of Rubbertown community
 - Evaluate photochemically reactive compounds in support of ozone reduction efforts (Photochemical Assessment Monitoring Station – PAMS)

Air Toxics / PAMS Monitoring

■ Traditional Method

- Manual collection using canisters
- Samples typically collected once every 6 or 12 days
- Samples shipped to lab for analysis
- Samples represents 24-hr period

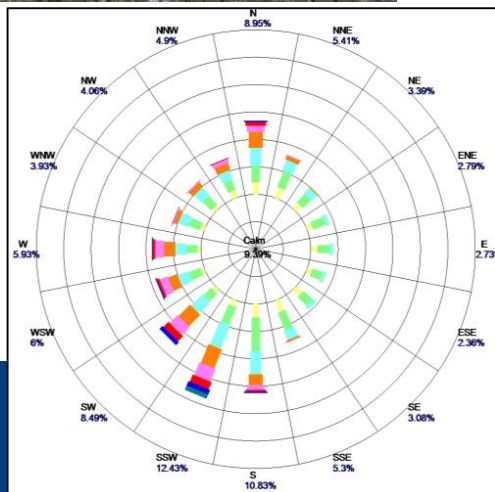
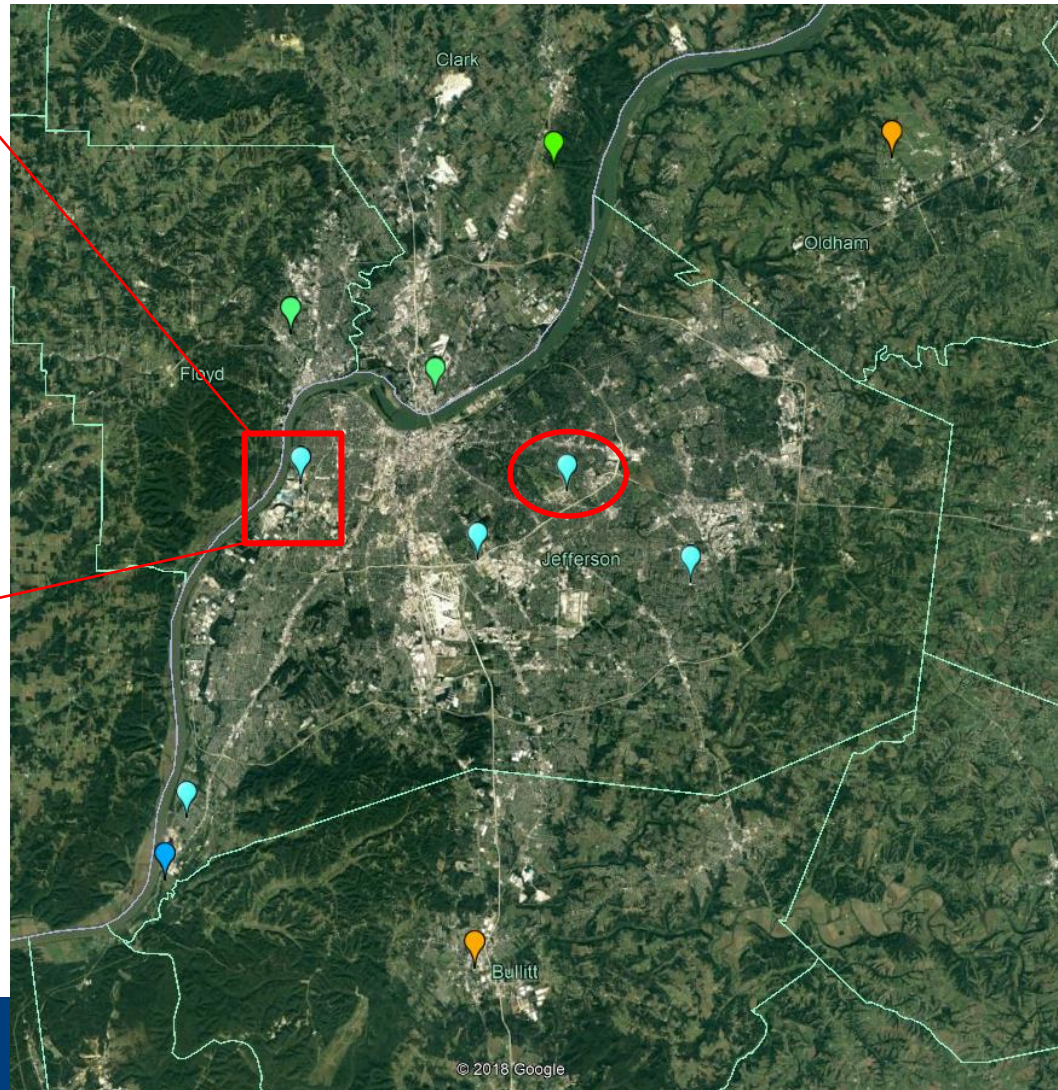
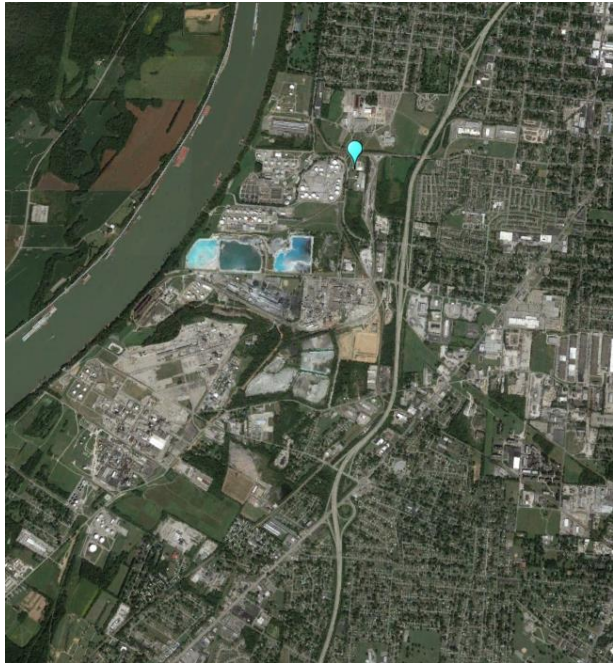


■ Modern Method

- Automated Gas Chromatography
 - Two Auto GCs – Dual FIDs
- Samples collected every hour
- Samples analyzed in near real time
- Raw data available within the hour
- While temporal resolution is improved, additional challenges exist

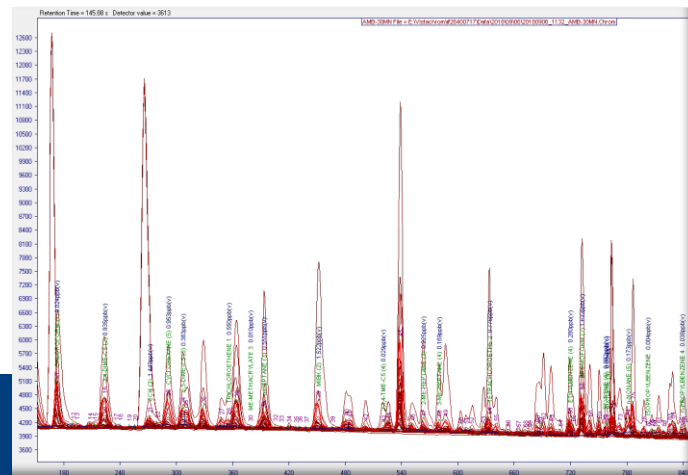


Air Toxics / PAMS Monitoring



Air Toxics / PAMS Monitoring

- Auto GC technology is complex and produces large amounts of data
- APCD is the 2nd AQ agency in the country to operate Chromatotec Auto GC
- Continuous refinement of methodologies in progress
- APCD staff have worked extensively with manufacturer and participated in national workgroup calls to improve/refine method



What compounds will be monitored?

APCD Target Compounds

Acrylonitrile	Ethyl acrylate
Benzene	Ethylbenzene
Bromoform	Methyl methacrylate
1,3-Butadiene	MIBK
Carbon tetrachloride	Styrene
Chloroform	Toluene
1,4-Dichlorobenzene	
Dichloromethane	
Tetrachloroethene	
Trichloroethene	
Vinyl chloride	

Additional PAMS Compounds

Propylene	2,2-Dimethylbutane	n-Nonane
Isobutane	2,4-Dimethylpentane	Isopropylbenzene
n-Butane	Cyclohexane	a-Pinene
trans-2-Butene	2-Methylhexane	n-Propylbenzene
1-Butene	2,3-Dimethylpentane	m+p-Ethyltoluene
cis-2-Butene	3-Methylhexane	1,3,5-Trimethylbenzene
Cyclopentane	2,2,4-Trimethylpentane	o-Ethyltoluene
Isopentane	n-Heptane	b-Pinene
n-Pentane	Methylcyclohexane	1,2,4-Trimethylbenzene
trans-2-Pentene	2,3,4-Trimethylpentane	n-Decane
1-Pentene	2-Methylheptane	1,2,3-Trimethylbenzene
cis-2-pentene	3-Methylheptane	m-Diethylbenzene
Methylcyclopentane	n-Octane	o-Diethylbenzene
2,3-Dimethylbutane	m+p-Xylenes	n-Undecane
2-Methylpentane	o-Xylene	n- Dodecane
3-Methylpentane		
n-Hexane		
Isoprene		

Regulatory Authority

Laws and Regulations

- Air pollution in Louisville is controlled by both laws and regulations



- Laws
 - The acts, statutes, and ordinances passed by elected officials to govern an issue
 - Example: The Clean Air Act (CAA) is a federal law
- Regulations
 - Created by an agency to implement laws
 - Generally more specific than laws



APCD's Regulations may be found at www.louisvilleky.gov/government/air-pollution-control-district/air-pollution-regulations-and-laws

Clean Air Act §101

(a) Findings

The Congress finds—

- (1) that the predominant part of the Nation's population is located in its rapidly expanding metropolitan and other urban areas, which generally cross the boundary lines of local jurisdictions and often extend into two or more States;
- (2) that the growth in the amount and complexity of air pollution brought about by urbanization, industrial development, and the increasing use of motor vehicles, has resulted in mounting dangers to the public health and welfare, including injury to agricultural crops and livestock, damage to and the deterioration of property, and hazards to air and ground transportation;
- (3) that air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local governments; and
- (4) that Federal financial assistance and leadership is essential for the development of cooperative Federal, State, regional, and local programs to prevent and control air pollution.

Kentucky Revised Statutes (KRS)

Chapter 77

- APCD's regulations **must be at least as stringent as state and federal laws, but can be more stringent where needed**
- State and local air pollution agencies take the lead in carrying out the Clean Air Act

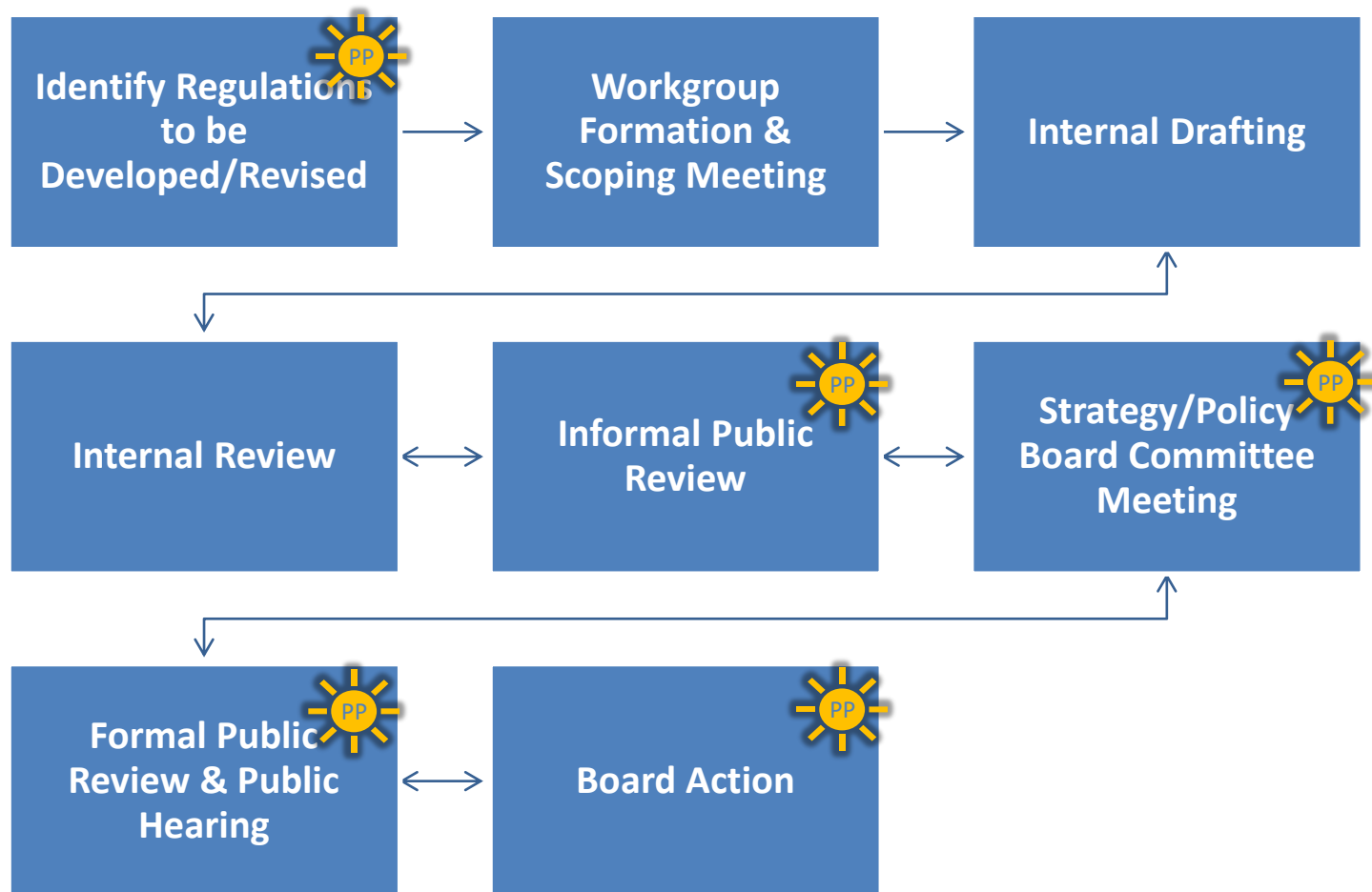


Air Pollution Control District Board

- Regulatory authority for air pollution control in Louisville Metro/Jefferson County authorized through KRS Chapter 77
- Private citizens appointed by the Mayor and approved by the Metro Council
- Adopts regulations, orders, and resolutions as needed to control air pollution



Regulatory Program Development



Commenting

- Actionable Comments
 - There are no bad comments
 - Only comments which can or cannot be acted on
 - Actionable comments are:
 - Timely
 - Pertinent/on topic
 - Within authority
 - At right step in process
 - Make an actionable request or recommendation



Commenting

- Stay informed – sign up for notifications via [GovDelivery](#)



- How to comment on regulatory actions

- In person at Public Hearings
- Form on Proposed Actions Page
- Email airregs@louisvilleky.gov
- Mail to:



Rachael Hamilton, Board Secretary Treasurer
Air Pollution Control District
701 West Ormsby Ave.
Louisville, KY 40203

Permitting

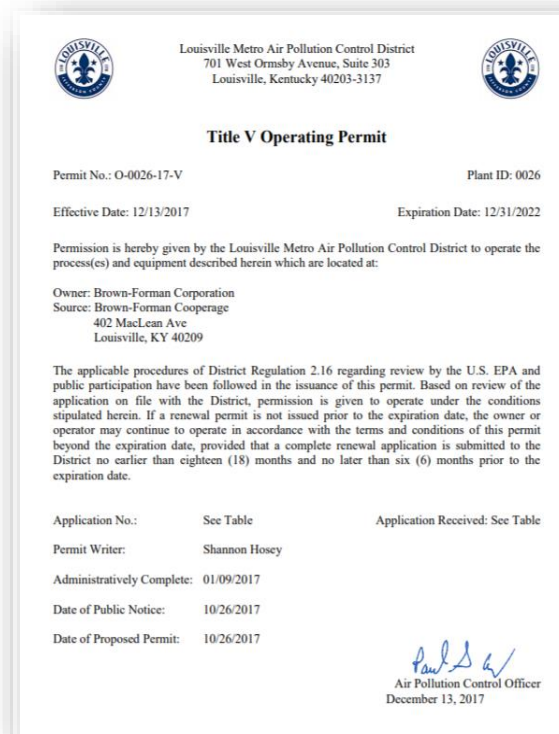
Permits

- Permits specify the many air pollution regulations applicable to the source
- Permits explain how the source will comply with the regulations
 - Ex: Emissions
- More like a contract than a building permit
 - An agreement between the APCD and a regulated entity



Who needs a permit?

- **Exempt** – low potential emissions; no federal rules
- **Registered** – low actual emissions; federal rules
- **Minor** – “facility,” but low emissions
- **FEDDOOP** – major potential, but limited actual emissions
- **Title V** – large emitters



The image shows a 'Title V Operating Permit' issued by the Louisville Metro Air Pollution Control District. The document includes the following information:

- Header:** Louisville Metro Air Pollution Control District, 701 West Ormsby Avenue, Suite 303, Louisville, Kentucky 40203-3137. The district's logo is on the left and right.
- Title:** Title V Operating Permit
- Permit No.:** O-0026-17-V
- Plant ID:** 0026
- Effective Date:** 12/13/2017
- Expiration Date:** 12/31/2022
- Permission:** Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:
- Owner:** Brown-Forman Corporation
- Source:** Brown-Forman Cooperage, 402 MacLean Ave, Louisville, KY 40209
- Text:** The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than six (6) months prior to the expiration date.
- Application No.:** See Table
- Application Received:** See Table
- Permit Writer:** Shannon Hosey
- Administratively Complete:** 01/09/2017
- Date of Public Notice:** 10/26/2017
- Date of Proposed Permit:** 10/26/2017
- Signature:** Paul D. [Signature]
- Title:** Air Pollution Control Officer
- Date:** December 13, 2017

What's in a permit?

- Statement of Basis (summary)
- Standards
 - Many are specifically prescribed in the regulations
 - Some are developed during the permitting process
 - They are not just numeric standards
- Monitoring/Recordkeeping
 - Production rates, temperature, pressure, material contents
- Reporting
- Testing (initial or periodic; 3rd party testers; EPA methods)



The Strategic Toxic Air Reduction (STAR) Program

- Regulatory program seeking to **reduce harmful contaminants in Louisville's air**
- Lists toxic air contaminants (TACs)
- Establishes framework for estimating risks associated with toxic air contaminants



Total Air Toxics

2005 - 2017

Jefferson County, KY Sources	2005 Total Air Releases in Pounds	2017 Total Air Releases in Pounds	% Change
Electric Generating Utilities (EGUs)	4,703,167	851,342	-82% Decrease
Non-EGUs	3,443,604	1,309,085	-62% Decrease
Total	8,146,770	2,160,427	-73% Decrease

Source: [EPA Toxics Release Inventory](#)

Public Participation

- Receive notifications about permits
 - Subscribe to APCD's electronic mailing list
- Title V Construction
- FEDOOP and Title V operating
- Open Records Request
 - Can be made for any permit at any time



Compliance and Enforcement

Compliance

- Allows the APCD to evaluate processes and activities that create air pollution
- Helps companies and individuals understand their responsibilities to comply with APCD and federal [regulations and laws](#)



Ensuring Compliance

- Perform Industrial Inspections and Review Periodic Reports
- Perform Investigations into community issues like odors and dust
- Provide Compliance Assistance to help people follow the rules
- When/if necessary, use Enforcement to compel compliance

Industrial Compliance

- Full Compliance Evaluations (required by EPA)
 - Title V
 - FEDOOP
- Review submitted reports from facilities
 - Annual, semi-annual, quarterly, compliance certifications, stack tests
- Emissions Inventory
- Asbestos Inspections and Permits
- Audit-level inspections of Risk Management Plan (RMP) facilities

Small Business Environmental Compliance Assistance Program

- Small business definition
 - Independently owned/operated
 - 100 or fewer employees
 - NOT a major source of emissions
- Services are free, confidential, and non-regulatory
- Services include
 - Onsite and technical assistance
 - Education outreach (workshops, seminars, literature)
 - Small business advocacy

Community Compliance

- Investigations during routine surveillance and in response to community complaints
- Document compliance with General Provisions:
 - Regulation 1.11 Control of Open Burning
 - Regulation 1.13 Control of Objectionable Odors to the Ambient Air
 - Regulation 1.14 Control of Fugitive Particulate Emissions

The screenshot shows the 'Report a Bad Smell' form on the Air Pollution Control District website. The form includes a header with the district's name and a navigation menu. The main content area contains instructions on how to report a bad smell, including a list of steps: 1. When an odor is affecting your immediate health and safety - such as burning your eyes or causing physical discomfort - call 911. 2. Otherwise, to report an odor that is less threatening but still annoying, call APCD at (502) 574-7321 or contact us via the web. 3. Help us track the odor. Tell us where you first detected it, the date and time it was detected, and how long it lasted. 4. Take note of any characteristics, such as 'chemical,' 'sewerlike,' 'flowery,' 'burnt,' 'strong,' 'mild,' or 'obnoxious.' 5. Jot down your observations so you'll have a record of the problem. The form also includes a 'Department' dropdown menu set to 'Air Pollution Control District' and a 'Service Category' dropdown menu set to 'Particulate Matter & Odors'. At the bottom, there is a 'Contact' section with the district's address and phone number.

AIR POLLUTION CONTROL DISTRICT

Home / Government / City Departments / Air Pollution Control District

Report a Bad Smell

Superstreaks, a city risk to a nearby place. Odors are part of life as a daily environmental risk. But when a bad smell causes an objectionable odor, there is place you can take the help. Investigate with the Louisville Office of the Pollution Control District has done not your odor complaint and, if warranted, our own violators who fail to address the problem. Here are steps you can take to control unwanted and persistent odors in your neighborhood.

1. **When an odor is affecting your immediate health and safety - such as burning your eyes or causing physical discomfort - call 911.**

2. **Otherwise, to report an odor that is less threatening but still annoying, call APCD at (502) 574-7321 or contact us via the web.**

3. **Help us track the odor. Tell us where you first detected it, the date and time it was detected, and how long it lasted.**

4. **Take note of any characteristics, such as "chemical," "sewerlike," "flowery," "burnt," "strong," "mild," or "obnoxious."**

5. **Jot down your observations so you'll have a record of the problem.**

Here are all of the options to report a bad smell or an unusual odor:

- Call APCD at (502) 574-7321 or contact us via the web.

Department: Air Pollution Control District

Service Category: Particulate Matter & Odors

Contact

Air Pollution Control District
5000 E. 10th Ave.
700 W. Overly Ave.
Suite 303
Louisville, KY 40203
8 a.m. to 5 p.m. Monday-Friday


Responding to Objectionable Odors

- New Metro-wide Information System (Citizen Portal)
- Odor log
- Interagency collaborations



AIR
POLLUTION
CONTROL
DISTRICT





**AIR
POLLUTION
CONTROL
DISTRICT**

ODOR LOG

INTENSITY SCALE

1 Slight: Odor is detectable and can be described by its characteristics or can be distinguished from other odors.

2 Moderate: Odor is strong enough to block the other odors, but is not so strong as to make someone try to avoid the odor.

3 Strong: A person would take a positive action to attempt to avoid the odor.

4 Very Strong: The odor produces physiological effects, such as nausea, difficulty of breathing, irritation of the eyes, nose, throat, or the level at which a residual smell remains after the odor is gone.

**REPORT ODORS
IMMEDIATELY
TO APCD
(502) 574-6000**

Examples of odor types

- Sewer
- Chemical
- Garbage
- Paint
- Rubber
- Manure
- Burnt material

Date	Start Time	End Time	Location (address, street intersection, etc.)	Type of Odor	Intensity	Impact on People	Other Observations	Date/Time Reported to APCD

www.louisvilleky.gov/APCD



ODOR

Sometimes, a city is a smelly place. Odors are part of life in a major metropolitan area. But when a smell becomes unbearable, the Air Pollution Control District will try to help.

1. If you believe an odor is affecting your health and safety, call 911 immediately.
2. Otherwise, contact APCD to report an offensive odor. Use the phone number or email below.
3. Help us track the odor. Tell us where and when you noticed it, and how long it lasted.
4. Note characteristics like "strong," "sewer-like," "chemical," "burnt," "flowery," etc.
5. Write down your observations, if possible.

APCD investigators will check out your complaint and, if warranted, can cite violators who fail to address the problem.

(502) 574-7321

air@louisvilleky.gov

**AIR
POLLUTION
CONTROL
DISTRICT**



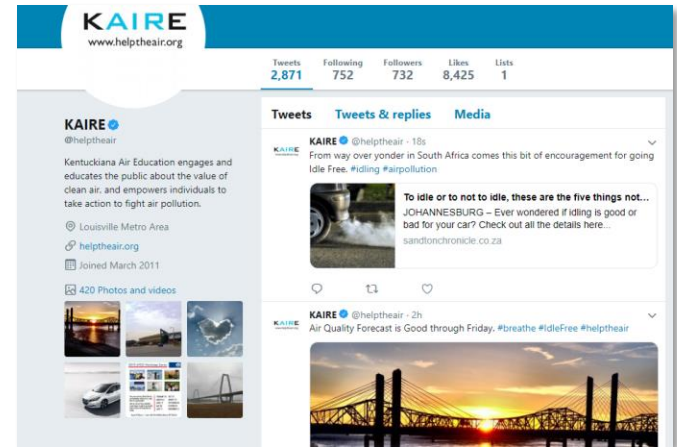
Enforcement

- Allows APCD to take steps to bring alleged violators into compliance through enforcement
- Warning Letter
- Issuing a Notice of Violation (NOV)
 - Settlement less than \$5,000
 - Agreed Board Order more than \$5,000
 - Administrative Hearing if an agreement is not reached/possible

Public Engagement

KAIRE

- Kentuckiana Air Education (KAIRE)
 - Increases awareness of the impact individual choices have on local air quality
 - Idle Free Program (businesses, schools, neighborhoods)
 - Encourages behavioral changes



Lawn Care for Cleaner Air

Grow More Mow Less

Grow More Mow Less

- Encourages people to plant material that doesn't need mowing



Lawn Care for Cleaner Air

- Rebates on **NEW** electric mowers, reel mowers, etc.



Community Engagement

- Partnership and participation with community organizations



Community Engagement (cont'd)

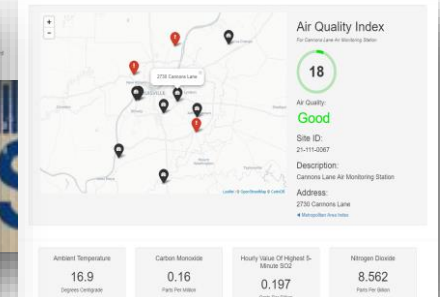
- Interagency Initiatives:
 - Environmental Protection Agency (EPA)
 - Kentuckiana Regional Planning & Development Agency (KIPDA)
 - KY Division for Air Quality (DAQ)
 - Louisville Metro Government partners
 - Office of Sustainability
 - Department of Public Health and Wellness
 - Louisville Resilience



Information Resources

- APCD website/emailing list/Twitter
- Louisville Air Watch
- LouieStat
- Open Records Request

Call APCD at
(502) 574-6000



Additional Resources

Air Pollution Control District

Louisvilleky.gov/APCD

Environmental Protection Agency (EPA)

Epa.gov

Epa.gov/Region4

Kentucky Division of Air Quality

Air.ky.gov

Air Quality Updates

Louisvilleky.gov/airquality

Airnow.gov

KAIRE

Helptheair.org

Facebook.com/helptheair

Twitter.com/helptheair

Lawn Care for Cleaner Air

Louisvilleky.gov/government/lawn-care-cleaner-air

Grow More Mow Less

Facebook.com/GrowMoreMowLess

Kentucky Revised Statute (Chapter 77)

<http://www.lrc.ky.gov/statutes/chapter.aspx?id=37430>

Questions?

Louisville Metro Air Pollution Control District

701 W. Ormsby Ave.
Ste. 303
Louisville, Ky. 40203

(502) 574-6000
www.louisvilleky.gov/APCD

Keith H. Talley Sr., Director